

Alg. 2 p. 278

#14  $K(x) = (x+3)(x-5)$

F:  $x \cdot x = x^2$

O:  $x(-5) = -5x$

I:  $3 \cdot x = 3x$

L:  $3 \cdot (-5) = -15$

$$x^2 - 5x + 3x - 15 = x^2 - 2x - 15$$

$ax^2 + bx + c$

$a = 1 \quad b = -2 \quad c = -15$

#16  $g(x) = (10-x)(x+4)$

F:  $10 \cdot x = 10x$

O:  $10 \cdot 4 = 40$

I:  $-x \cdot x = -x^2$

L:  $-x \cdot 4 = -4x$

$$10x + 40 - x^2 - 4x = -x^2 + 6x + 40$$

$ax^2 + bx + c$

$a = -1 \quad b = 6 \quad c = 40$

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$$\#18 \quad f(x) = -\sqrt{(x+3)(x-9)} = (x+3)(9-x)$$

$$F: x \cdot 9 = 9x$$

$$O: x(-x) = -x^2$$

$$I: 3 \cdot 9 = 27$$

$$L: 3(-x) = -3x$$

$$9x - x^2 + 27 - 3x = -x^2 + 6x + 27$$

$$ax^2 + bx + c$$

$$a = -1 \quad b = 6 \quad c = 27$$

$$\#20 \quad h(x) = 2(x+1)(3x-4) = (2x+2)(3x-4)$$

$$F: 2x \cdot 3x = 6x^2$$

$$O: 2x(-4) = -8x$$

$$I: 2 \cdot 3x = 6x$$

$$L: 2(-4) = -8$$

$$6x^2 - 8x + 6x - 8 = 6x^2 - 2x - 8$$

$$ax^2 + bx + c$$

$$a = 6 \quad b = -2 \quad c = -8$$

$$\#22 \quad f(x) = 2x(x+5) = 2x^2 + 10x$$

$$ax^2 + bx + c$$

$$a = 2 \quad b = 10 \quad c = 0$$

$$\#24 \quad f(x) = (4x+1)(4-x)$$

$$F: 4x \cdot 4 = 16x$$

$$O: 4x(-x) = -4x^2$$

$$I: 1 \cdot 4 = 4$$

$$L: 1(-x) = -x$$

$$16x - 4x^2 + 4 - x = -4x^2 + 15x + 4$$

$$ax^2 + bx + c$$

$$a = -4 \quad b = 15 \quad c = 4$$

$$\#26 \quad f(x) = (x-6)(x+6)$$

$$F: x \cdot x = x^2$$

$$O: x \cdot 6 = 6x$$

$$I: -6 \cdot x = -6x$$

$$L: -6 \cdot 6 = -36$$

$$x^2 + 6x - 6x - 36 = x^2 - 36$$

$$ax^2 + bx + c$$

$$a = 1 \quad b = 0 \quad c = -36$$